

ABSTRACT

Mine planning is an important stage in the feasibility study and plans for mining operations. Planning a modern open pit requires a computer model of the resource to be mined. Two important aspects in the work pit mine planning is the design or the deadline for mining as well as the phasing and scheduling production to annual planning.

Limestone quarrying PT. Holcim Indonesia Tbk, astrolnometrically Cilacap Plants located between lines $7^{\circ} 43' 51''$ - $7^{\circ} 44' 27''$ latitude, and the line $109^{\circ} 00' 36''$ - $109^{\circ} 01' 55''$ longitude. While administratively included in the island of Nusakambangan in Sodong Limusbuntu, Tambakreja, District of South Cilacap, Cilacap, Central Java. Adjacent to the northern border with Segara Anakan, Eastern, Southern, and Western borders with forests of Department of Justice and Human Rights of Indonesia.

Location of the reasearch conducted in quarrying XI in limestone quarrying Nusakambangan which has an area of 22 ha. The results of assessment of mine able reservers of limestone quarrying XI is 16.119.106,14 tons up to level 40 meters from sea and land cover is peeled volume of 117.453,76 LCM. Dimensional level of the desaign area is: high level of 6 meters, a width of safety bench is 5 meters and a slope of level 60° to the target production is 3.760.000 tons/ year, it acquired the mine life is 5 years.

Dimensions of the largest heavy equipment used to more use the road mine is dump truck 773 Cat B. Based on this minimum width with a two-lane road that is used on the condition of a straight road at 15 meters while cornering on road conditions at 17 meters. Maximum slope of the road by 10%. Superelevasi dump truck made in order to remain stable on the curve is 90mm/m. So that no stagnant water on the road that can interfere with the production, it's prepared cross slope of 40mm/m. Unloading equipment that in used is Wheel Loader Cat 990 for 2 units in operation and 1 unit for back up, while the conveyance in used is 7 units of Dump Truck Cat 773B for operation and 1 unit for back up.

Key words: Part of mining plan, ramp geometry, bench geometry, unloading equipment needs and means of conveyance.